

C l a i m s

1. Tank for storing cryogenic fluids, comprising a tank (11) having a base plate (12), a vertical wall (14) and preferably an upper top (15), the tank (11) being provided with a fluid tight barrier (26) preventing the stored fluids from escaping out of the tank (11), the fluid tight barrier (26) preferably being formed of thin, joined metal plates,

c h a r a c t e r i z e d in that the vertical wall (14) comprises an inner structurally supporting wall element (24, an outer structurally supporting wall element (25) and that the fluid tight barrier (26) is arranged between the inner (24) and the outer (25) structurally supporting wall elements, the structurally supporting wall elements (24,25) and the intermediate fluid tight barrier (26) together forming a compact, structurally integrated and fluid tight wall (14).

2. Tank according to claim 1,

c h a r a c t e r i z e d in that the inner structurally supporting wall element (24) is formed by multi-axially prestressed concrete.

3. Tank according to claim 1,

c h a r a c t e r i z e d in that the outer structurally supporting wall element (25) is formed by multi-axially prestressed concrete.

4. Tank according to claim 1,

c h a r a c t e r i z e d in that the intermediate fluid tight barrier (26) is made of a ductile material, such as Ni-steel.

5. Tank according to claim 1,

c h a r a c t e r i z e d in that the intermediate fluid tight barrier (26) is made of joined metal plates.

6. Tank according to claim 5,
c h a r a c t e r i z e d in that the edges of the metal plates are bent upwards and folded.
7. Tank according to claim 5 or 6,
c h a r a c t e r i z e d in that the edges of the metal plates are welded together.
8. Tank according to claim 9,
c h a r a c t e r i z e d in that the edges of the metal plates overlap each other partly and are glued together, or pressed together to form a tight membrane.
9. Tank according to claim 1-9, where the tank (11) is provided with a fluid tight base plate (23) formed by metal, the base plate (23) resting movable on a support (21,22) and where the vertical wall (14) is made of concrete,
c h a r a c t e r i z e d in that the vertical wall element (14) at its lower end is terminated by means of a horizontal metal plate (27) and an inner (29) and an outer (28) vertical steel plate extending along the inner and outer circumference of the vertical wall (14), the vertical steel plates (28,29) being welded to the horizontal base plate (27).
10. Tank according to claim 9,
c h a r a c t e r i z e d in that the horizontal (27) and the vertical plates (28,29) form an integrated unit together with the lower part of the vertical concrete wall (14).
11. Tank according to claim 9 or 10,
c h a r a c t e r i z e d in that the lower end of the membrane (26) is welded to the horizontal steel plate (27), forming a tight joint between the horizontal (23) and the vertical (26) fluid tight barrier.

12. Tank according to claim 1, characterized in that the inner structural supporting wall element (24) is formed by wood.

13. Tank according to claim 1, characterized in that the outer structural supporting wall element (25) is made of wood.

14. Tank according to claim 1, characterized in that the intermediate fluid tight barrier (26) is formed by sheets of plastic materials, welded together along their edges.

15. Method for constructing a fluid tight tank (11) for storage of fluids, comprising a base portion (12), a vertical wall part (14) of concrete and preferably an upper top (15), the base portion (12) being constructed first whereupon the vertical wall part (14) is constructed, preferably by means of slipforming or jumpforming, characterized in that the vertical wall (14), comprising an inner structurally supporting wall element (24), an outer structurally supporting wall element (25) and an intermediate fluid tight barrier (26), together forming a compact structural supporting fluid tight wall element (14), is reinforced and concreted at least partly, whereupon the fluid tight barrier (26) is arranged on the exterior of the concreted inner structurally supporting wall element (24) whereupon the outer structurally supporting wall structure (25) is reinforced and concreted.

16. Method according to claim 15, characterized in that the lower part of the wall (14) is erected on a base, said lower part (14) comprising a base plate (27) of steel, an inner (29) and outer (28) steel plate extending along the inner and outer circumference of the lower part of the wall (14) and further is welded to the horizontal base plate (27) and where the lower end of the fluid tight membrane (26) in the form of steel plates also is welded to the horizontal base

plate (27), whereupon this portion of the wall is reinforced and concreted.

17. Method according to claim 16,
c h a r a c t e r i z e d in that the inner structurally supporting wall element (24) is erected at least partly up to a level prior to starting the process of installing the intermediate fluid tight barrier (26).

18. Method according to claim 17,
c h a r a c t e r i z e d in that the intermediate fluid tight barrier (26) is installed at least to a certain height before starting the process of reinforcing and concreting the outer structurally supporting wall (25).